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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/828,294	04/21/2004	Yumin Liu	741440-60	4374

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EXAMINER

KAMEN, NOAH P

ART UNIT	PAPER NUMBER
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3747

DATE MAILED: 12/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/828,294	Applicant(s) LIU ET AL.	
	Examiner Noah Kamen	Art Unit 3747	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4/21/04</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Masanori (JP 10-077835). Figure 2 shows a slightly upwardly inclined wall 11 including fins 16.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masanori in view of Klundt (4154182). Masanori only shows fins. Klundt shows an upwardly inclined wall at 28 and channels 41 on a bottom wall of an oil pan (albeit in a sewing machine) which would provide superior heat exchange over mere fins; therefore, it would have been obvious to one of ordinary skill in the art to modify Masanori to have channels.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Masanori in view of Klier (2575877). To use pipes for in a crankcase for cooling oil, as taught by Klier at 6 instead of fins in Masanori would have been obvious to one of ordinary skill in the art since they are deemed functional equivalents.

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Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Masanori as applied to claim 1 above, and further in view of Fink et al (4610228).

It would have been obvious to one of ordinary skill in the art to use a heat shield between a block and a plastic crankcase to protect the crankcase as taught by Fink et al at 15 in either Masanori where they too would use plastic for the crankcase to save weight and on the cost of manufacture as compared to metal.

Claim 5 rejected under 35 U.S.C. 103(a) as being unpatentable over Masanori in view of Klier (2575877) as applied to claim 4 above, and further in view of Fink et al.

It would have been obvious to one of ordinary skill in the art to use a heat shield between a block and a plastic crankcase to protect the crankcase as taught by Fink et al at 15 in either Masanori where they too would use plastic for the crankcase to save weight and on the cost of manufacture as compared to metal.

Claim 6/1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Daub (2650578) in view of Masanori. Daub shows the recited air passage between valve stems 118 and 121 in figure 5. The oil pan (figure 16) has an upwardly inclined front wall, but no fan induced air flow. It would have been obvious to one of ordinary skill in the art to modify Daub to include a passage from fan 176 to the oil pan to facilitate oil cooling as taught either by Masanori.

Claim 6/4 rejected under 35 U.S.C. 103(a) as being unpatentable over Daub in view of Klier. Daub shows the recited air passage between valve stems 118 and 121 in figure 5. However, the oil pan lacks a pipe extending there through for cooling the oil. It would have been obvious to one of ordinary skill in the art to include oil pan pipes in Daub in view of Klier to facilitate oil cooling.

Note, claim 6, lines 6 and 7 have typos.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Noah Kamen whose telephone number is 571 272 4845. The examiner can normally be reached on M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Yuen can be reached on 571 272 4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Noah Kamen
Primary Examiner
Art Unit 3747

nk